AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) Method to determine the presence or the absence of at least one target nucleic acid by reference to at least one control nucleic acid, which comprises processing said target nucleic acid so as to allow its detection, submitting said control nucleic acid to comparable processing conditions, and validating or invalidating the detection result obtained for said target nucleic acid by comparing it to the detection result obtained for said control nucleic acid,

   wherein said control nucleic acid is provided by a solid support onto which it is adsorbed, and from which a definite amount thereof is to be desorbed, whereby there is provided an essentially quantitatively reproducible and controlled amount of said control nucleic acid for submission to said comparable processing conditions.

2. (Original) Method according to claim 1,

   said method comprising the steps of:

   - providing with said solid support comprising said at least one control nucleic acid adsorbed thereon, and contacting said solid support with a liquid medium, so as to allow a definite amount of said control nucleic acid to be desorbed from said solid support into said liquid medium,

substantially without affecting the primary sequence of said control nucleic acid;

- optionally, further processing the resulting liquid medium containing said control nucleic acid;
- submitting said control nucleic acid which is contained in or originating from said resulting, optionally further processed, liquid medium, to comparable processing conditions, so that it constitutes a processing control by reference to the processing of said target nucleic acid;
- determining whether said target nucleic acid is detected or not, and determining whether said control nucleic acid is detected or not;
- comparing the target nucleic acid detection result to the one of said control nucleic acid, so as to validate or invalidate the target nucleic acid detection result;

wherein said processing comprises at least one processing step selected from the group constituted by amplification, including PCR amplification, gel electrophoresis, Southern analysis, northern analysis, hybridization including probe-mediated hybridization, and combinations thereof.

3. (Currently Amended) Method according to ~~any one of claims~~claim 1-~~2~~, wherein said solid support comprises at least one membrane.

4. (Currently Amended) Method according to ~~the preceding~~ claim 3, wherein said membrane material is selected from the group constituted by cellulose,

cellulose-derived materials including chemically-treated celluloses, glass fibers, nylons, polyethersulfones, polypropylene, woven porous polymers, non-woven porous polymers, PTFE, porous glasses, and PVDF.

5. (Currently Amended) Method according to ~~any one of claims~~claim 3[[-4]], wherein said membrane material is selected from the group constituted by cellulose, cellulose-derived materials including chemically-treated celluloses, glass fibers, nylons, polyethersulfones, and polypropylene; preferably from the group constituted by cellulose, cellulose-derived materials and nylons.

6. (Currently Amended) Method according to ~~any one of claims~~claim 3-~~5~~, wherein said membrane has a thickness in the range 50-3000 microns, preferably 100-1500 microns, more preferably 150-1000 microns.

7. (Currently Amended) Method according to ~~any one of claims~~claim 3-~~6~~, wherein said membrane has the shape of a disk, a square, a rectangle or a strip.

8. (Currently Amended) Method according to ~~any one of claims~~claim 1-~~7~~, wherein said solid support further comprises at least one carrier agent adsorbed thereon.

9. (Currently Amended) Method according to ~~the preceding~~ claim 8, wherein said carrier agent is selected from the group constituted by:

- nucleic acids unrelated or heterologous to said control nucleic acid, so as to substantially not interfere in the detection processing of said control nucleic acid;
- albumins.

10. (Currently Amended) Method according to ~~any one of claims~~claim ~~8-9~~, wherein said carrier agent is a nucleic acid unrelated or heterologous to said control nucleic acid and also unrelated or heterologous to said target nucleic acid, so as to substantially not interfere in the detection processing of said control and said target nucleic acids.

11. (Currently Amended) Method according to ~~any one of claims~~claim ~~8-10~~, wherein said carrier agent is selected from the group constituted by polyA, polyG, polyC, polyT, polydA, polydG, polydC, polydT, polydU, homopolydeoxyribonucleotides, homopolyribonucleotides , block-polymers of deoxyribonucleotides, block-polymers of ribonucleotides, block-polymers of deoxyribonucleotides and ribonucleotides, and mixtures thereof.

12. (Currently Amended) Method according to ~~any one of claims~~claim ~~8-10~~, wherein said carrier agent is selected from the group constituted by:

- fish DNA, such as herring DNA, especially herring sperm DNA, and salmon DNA, especially salmon sperm DNA, and mixtures thereof;
- albumins, especially bovine serum albumin (BSA).

13. (Currently Amended) Method according to ~~any one of claims~~claim 8~~-11~~, wherein said carrier agent is selected from the group constituted by:
    - homopolydeoxyribonucleotides, block-polymers of deoxyribonucleotides, and mixtures thereof;
    - albumins, especially bovine serum albumin (BSA).

14. (Currently Amended) Method according to ~~any one of claims~~claim 1~~-13~~, wherein said control nucleic acid is selected from the group constituted by positive controls, negative controls, internal controls, external controls, qualitative controls, semi-quantitative controls, quantitative controls, real-time amplification controls, and combinations thereof.

15. (Currently Amended) Method according to ~~any one of claims~~claim 1~~-14~~, wherein said nucleic acid processing for detection comprises at least one nucleic acid extraction and/or purification step, prior to said nucleic acid detection step.

16. (Currently Amended) Method according to ~~any one of claims~~claim 1-~~15~~, wherein said processing comprises a detection step involving at least one hybridization step.

17. (Currently Amended) Method according to ~~any one of claims~~claim 1-~~16~~, wherein said processing comprises a detection step involving at least one PCR or RT-PCR, especially real-time and quantitative PCR or RT-PCR.

18. (Currently Amended) Method according to ~~any one of claims~~claim 1-~~17~~, wherein said target nucleic acid detection is a quantitative detection, preferably a real-time quantitative detection.

19. (Currently Amended) Method according to ~~any one of claims~~claim 1-~~18~~, wherein said control nucleic acid detection is a quantitative detection, preferably a real-time quantitative detection.

20. (Currently Amended) Solid support for at least one control nucleic acid, said solid support being specifically adapted for carrying out a method for the determination of presence or absence of at least one target nucleic acid by reference to at least one control nucleic acid according to ~~any one of claims~~claim 1-~~19~~,

said solid support comprising:

- at least one absorbent support made of a material whose composition and structure allow for non covalent adsorption of said control nucleic acid onto said solid support, and which is or has been heat-treated and/or chemically-treated so as to be essentially devoid of any enzymatic activity;
- at least one carrier agent adsorbed thereon, which facilitates the adsorption of said control nucleic acid onto said solid support and/or facilitates the desorption of said control nucleic acid from said solid support and/or promoting the stability of said control nucleic acid on said solid support, especially in the course of storage, substantially without affecting the primary sequence of said control nucleic acid;
- optionally, said control nucleic acid adsorbed thereon;

wherein:

- said carrier agent is selected from the group of albumins; or
- said solid support comprises said control nucleic acid adsorbed thereon, and said carrier agent is selected from the group constituted by nucleic acids unrelated or heterologous to said control nucleic acid and/or to said target nucleic acid, so as to generally not interfere in the detection method.

21. (Currently Amended) Solid support according to ~~the preceding~~ claim 20, wherein said carrier agent is a nucleic acid unrelated to any naturally occurring human nucleic acid.

22. (Currently Amended) Solid support according ~~any one of claims~~claim 20~~-21~~, wherein said carrier agent is a nucleic acid unrelated to any nucleic acid originating from nucleic acid originating from any naturally occurring agent being pathogen to a mammalian, especially to human.

23. (Currently Amended) Solid support according to ~~any one of claims~~claim 20-~~22~~, wherein said carrier agent is selected from the group constituted by:

- polyA, polyG, polyC, polyT, polydA, polydG, polydC, polydT, polydU, homopolydeoxyribonucleotides, homopolyribonucleotides , block-polymers of deoxyribonucleotides, block-polymers of ribonucleotides, block-polymers of deoxyribonucleotides and ribonucleotides, and mixtures thereof;
- fish DNA;
- albumins.

24. (Currently Amended) Solid support according to ~~any one of claims~~claim 20-~~22~~, wherein said carrier agent is selected from the group constituted by:

- homopolydeoxyribonucleotides such as polydA, block-polymers of deoxyribonucleotides, and mixtures thereof;
- herring DNA, especially herring sperm DNA, and salmon DNA, especially salmon sperm DNA, and mixtures thereof;
- albumins, such as bovine serum albumin (BSA).

25. (Currently Amended) Solid support according to ~~any one of claims~~claim 20-~~24~~, wherein said carrier agent is selected from the group constituted by:

- homopolydeoxyribonucleotides such as polydA, block-polymers of deoxyribonucleotides, and mixtures thereof;
- albumins, such as bovine serum albumin (BSA).

26. (Currently Amended) Solid support according to ~~any one of claims~~claim 20-~~25~~, wherein said carrier agent comprises :

- 0.1-50 μg of nucleic acids, preferably 1-10 μg, more preferably 4-8 μg, even more preferably 5-6 μg, or
- 2-100 μg of albumin (e.g. BSA), preferably 5-50 μg, more preferably 10-30 μg, even more preferably 15-20 μg.

27. (Currently Amended) Solid support according to ~~any one of claims~~claim 20-~~26~~, wherein said support comprises at least one membrane.

28. (Currently Amended) Solid support according to ~~the preceding~~ claim 27, wherein said membrane material is selected from the group of cellulose, cellulose-derived materials including chemically-treated celluloses, glass fibers, nylons, polyethersulfones, polypropylene, woven porous polymers, non-woven porous polymers, PTFE, porous glasses, and PVDF.

29. (Currently Amended) Solid support according to ~~any one of claims~~claim 27-~~28~~, wherein said membrane material is selected from the group constituted by cellulose, cellulose-derived materials including chemically-treated celluloses, glass fibers, nylons, polyethersulfones, and polypropylene.

30. (Currently Amended) Solid support according to ~~any one of claims~~claim 27-~~29~~, wherein said membrane material is selected from the group of cellulose, cellulose derived materials and nylons.

31. (Currently Amended) Solid support according to ~~any one of claims~~claim 27-~~30~~, wherein said membrane has a thickness in the range 50-3000 microns, preferably 100-1500 microns, more preferably 150-1000 microns.

32. (Currently Amended) Solid support according to ~~any one of claims~~claim 27-~~31~~, wherein said membrane has the shape of a disk, a square, a rectangle or a strip.

33. (Currently Amended) Solid support according to ~~any one of claims~~claim 27-~~32~~, wherein said membrane has a surface in the range 10-500 mm^2, preferably 20-250 mm^2, more preferably 30-200 mm^2.

34. (Currently Amended) Solid support according to ~~any one of claims~~claim 20-~~33~~, wherein said enzymatic activity comprises nuclease activity, including DNAse and/or RNase activity.

35. (Currently Amended) Solid support according to ~~any one of claims~~claim 20-~~34~~, wherein said solid support further comprises at least one control nucleic acid adsorbed thereon.

36. (Currently Amended) Solid support according to ~~the preceding~~ claim 35, wherein said control nucleic acid is selected from the group constituted by positive controls, negative controls, internal controls, external controls, qualitative controls, semi-quantitative controls, quantitative controls, real-time amplification controls, and combinations thereof.

37. (Currently Amended) Solid support according to ~~any one of claims~~claim 35-~~36~~, wherein said control nucleic acid is adsorbed in an amount in the range 10-10^8 copies, preferably 10^2-10^5 copies.

38. (Currently Amended) Solid support according to ~~any one of claims~~claim 35-~~37~~, wherein said control nucleic acid is adsorbed in an amount in the range 10-1000 copies, preferably 20-500 copies, more preferably 50-100 copies.

39. (Currently Amended) Series of supports which comprises a plurality of supports according to ~~any one of claims~~claim 35-~~38~~, wherein each of said supports carries a different standardized amount of the same control nucleic acid adsorbed thereon, such that said series of supports provides with a calibration range of said control nucleic acid, preferably in the range 10-10^8 copies, more preferably 10^2-10^5 copies, even more preferably 20-500 copies, most preferably 50-100 copies.

40. (Currently Amended) Process for the manufacture of a solid support according to ~~any one of claims~~claim 20-~~38~~, said process comprising the steps of:

- providing with an absorbent support material;
- heat-treating and/or chemically-treating said support, so as to essentially remove any nuclease activity;
- depositing at least one carrier agent onto said support material; and,
- optionally, depositing at least one control nucleic acid onto said support material so as to adsorb the desired amount of said control nucleic acid onto said support.

41. (Currently Amended) Process according to ~~the preceding~~ claim 40, wherein said heat treatment is performed at a temperature in the range from 100°C to 180°C.

42. (Currently Amended) Process according to ~~any one of claims~~claim 40[[-41]], wherein said chemically treating comprises a DEPC (Diethyl-pyrocarbonate) treatment.

43. (Currently Amended) Process according to ~~any one of claims~~claim 40[[-42]], wherein said depositing step(s) comprise(s) at least one spotting step.

44. (Currently Amended) Process according to ~~any one of claims~~claim 40[[-43]], wherein said depositing step(s) comprise(s) at least one drying step.

45. (Currently Amended) Process according to ~~the preceding~~ claim 44, wherein said drying step is performed at a temperature in the range from 45°C to 70°C, preferably at around 60°C.

46. (Currently Amended) Kit comprising:

- at least one solid support according to claim 20~~-38~~ and/or at least one series of solid supports ~~according to claim 39~~;
- optionally, a dispenser for distributing said solid support into a container; and,
- instructions for the use thereof.

47. (Currently Amended) Kit according to ~~the preceding~~ claim 46, wherein said kit is selected from the group constituted by:

- Kit for nucleic acid extraction and/or purification;
- Kit for nucleic acid detection;
- Kit for nucleic acid amplification, including PCR amplification, RT-PCR amplification, real-time PCR, quantitative PCR;
- Kit for the diagnosis of a disease or a condition.